UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II
OCT 6 2015 NEW YORK, NEW YORK 10007

SUBJECT: Confirmation of Verbal Authorization to Initiate Removal Action Activities at the Wurtsboro Lead Mine Site in Mamakating, Sullivan County, New York

FROM: Andrew L. Confortini, On Scene Coordinator
Removal Action Branch

TO: Walter E. Mugdan, Director
Emergency and Remedial Response Division

THRU: Joseph D. Rotola, Chief
Removal Action Branch

The purpose of this memorandum is to confirm the Division Director's September 23, 2015 verbal authorization of $500,000 in mitigation funding and $150,000 in RST contractor funding for a total project ceiling of $650,000 to initiate an emergency Comprehensive Environmental Response Compensation and Liability Act (CERCLA) removal action at the Wurtsboro Lead Mine Site (Site ID# A25U).

On September 4, 2015, EPA received a written request from the New York State Department of Environmental Conservation (NYSDEC) requesting the conditions at the Wurtsboro Lead Mine Site (Site) be evaluated for a possible CERCLA emergency response action. The Site (NYSDEC Site No. 353013) is a lead mine that was abandoned in 1962. EPAs review of the Site Characterization Report (July 2013) prepared for the NYSDEC, concluded that a human exposure pathway exists at the Site from direct contact to lead present in mine wastes. These wastes include mine tailings, millings, overburden rock, and surface water discharges.

The Site is located in the Wurtsboro Ridge State Forest in the Town of Mamakating, Sullivan County, New York and the Delaware and Hudson (D&H) Canal Linear Park. The area of contamination associated with the mine operation encompasses approximately 20-acres of the 1,000-acre State Forest.

The Site is comprised of two main areas: the upper area of former mining operations and the lower area of former ore processing operations. The elevation between upper and lower portions range from approximately 1,300-feet above mean sea level (msl) to 550-feet above msl. The

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upper portion is owned by the State of New York and managed by NYSDEC. The lower portion is primarily located on state-owned land, however contamination extends to the adjacent Delaware and Hudson (D&H) Canal Linear Park, which is owned and maintained by Sullivan County.

The mine was historically known as the Shawangunk Mine and the Mamakating Mine, which was one of several zinc-lead mines in the Shawangunk Mountains. During mining operations, low-grade overburden was extracted from shafts to reach veins of high-grade galena. The galena ore was conveyed via an aerial tram, which carried the material down the slope to the mill. The mining operation created four distinct surface deposits of mine tailings that remain on the property. Three of the tailing deposits are located in the upper area adjacent to the old mine shafts. The fourth is comprised of sand sized material resulting from the milling process, which is located in the lower area adjacent to the D&H Canal and Linear Park. Groundwater discharge, which emanates from the upper mine and lower mine runs through the tailing piles and discharges into the D&H Canal. Soil particles from the lower tailings pile have migrated and accumulated as a fine-grained sediment deposit in the D&H Canal.

The NYSDEC posted warning signs around the perimeters of the tailings piles, establishing restricted areas warning the public that the soil and water in the area is contaminated with lead.

The principal threat to the public is direct contact with high levels of lead in the tailings piles and surface/groundwater runoff. The tailings piles have been tested and found to contain Toxicity Characteristic Leaching Procedure (TCLP) concentrations ranging from 5.3 to 268 parts per million (ppm). A TCLP concentration of 5ppm meets the regulatory criteria as a hazardous waste. Water samples collected at the lower mine discharge point have been found to contain lead concentrations which range from 410 to 710 parts per billion (ppb). The NYSDEC ecological Quality Standard for lead in surface water is 4.1ppb.

The Site is accessed by the public as evidenced by all-terrain vehicle tracks, empty beverage containers, signs of target shooting, the presence of a geocache, and websites describing the collection of galena fragments in the tailings piles. The public would be exposed to hazardous substances during their visits to the area. NYSDEC requested that the EPA consider an emergency removal action to address the direct contact threat to hazardous substances, particularly lead.

Prior to initiating any action at a mine site, EPA Headquarters approval is now required. Headquarters provided written authorization to Region 2's Removal Action Branch on September 17, 2015.

On September 22 and 23, 2015, EPA met with NYSDEC representatives at the Site to inspect the upper and lower former operation areas.

Based on the NYSDEC sampling events and results from their laboratory analysis, the mine tailings, millings, overburden rock, and surface water are considered CERCLA designated hazardous substances as defined in section 101(14) of CERCLA, 42 U.S.C. § 9601(14). The Site is defined as a facility under Section 101(9) of CERCLA, 42 U.S.C. § 9601(9). Conditions at the Site meet the requirements of Section 300.415(b) of the National Contingency Plan (NCP) for the undertaking of a CERCLA removal action.

The removal action activities to be conducted under this verbal authorization will include:

: Consolidating wastes;
: Installing security fencing and signage;
: Evaluation/Stabilization of entrance roads;
: Pre-classification of wastes;
: Preparation of work plans to remove lead-contaminated wastes; and
: Pilot tests on passive treatment systems for surface water discharges.

This confirmation memorandum will be followed by a full Action Memorandum to document the removal action, and to request a 12-month exemption and ceiling increase.

ATTACHMENT B

Confortini, Andrew

From: Rotola, Joe
Sent: Thursday, September 17, 2015 2:16 PM
To: Harkay, Dan; Pane, Mark; Confortini, Andrew
Cc: Giacobbe, Karen
Subject: Fwd: Proposed Removal Work at the Wurtsboro Lead Mine Site

Got it.

Sent from my iPhone

Begin forwarded message:

> **From:** "Irizarry, Gilberto" <Irizarry.Gilberto@epa.gov>
> **Date:** September 17, 2015 at 1:50:58 PM EDT
> **To:** "Mugdan, Walter" <Mugdan.Walter@epa.gov>, "Rotola, Joe" <Rotola.Joe@epa.gov>
> **Cc:** "Woolford, James" <Woolford.James@epa.gov>, "Rotola, Joe" <Rotola.Joe@epa.gov>, "Carpenter, Angela" <Carpenter.Angela@epa.gov>, "Woodyard, Josh" <Woodyard.Joshua@epa.gov>, "Fitz-James, Schatzi" <Fitz-James.Schatzi@epa.gov>, "Stalcup, Dana" <Stalcup.Dana@epa.gov>, "Cheatham, Reggie" <cheatham.reggie@epa.gov>, "Rigger, Don" <Rigger.Don@epa.gov>
> **Subject: RE: Proposed Removal Work at the Wurtsboro Lead Mine Site**
>
> Walter and Joe:
>
> In consultation and following a review by both OSRTI and OEM, per the 9/4/15 memo, HQ concurs with you proceeding with the proposed action(s) at the subject site outlined in your note/request below.
>
> Please do keep us aware of progress and/or of any concerns or issues that arise over the course of the site work.
>
> Thanks and regards,
>
> Gilberto "Tito" Irizarry, Director
> Preparedness & Response Operations Division (PROD)
> Office of Emergency Management (OEM)
> U.S. Environmental Protection Agency
> O: 202-564-7982
> C: 202-821-8138
>
> ---
>
> **From:** Cheatham, Reggie
> **Sent:** Friday, September 11, 2015 9:30 AM
> **To:** Mugdan, Walter
> **Cc:** Woolford, James; Rotola, Joe; Carpenter, Angela; Irizarry, Gilberto; Woodyard, Josh; Fitz-James, Schatzi; Stalcup, Dana
> **Subject:** RE: Proposed Removal Work at the Wurtsboro Lead Mine Site
>
> Walter
>
> We are working this with OSRTI. From my read it looks fine but OSRTI will need to sign off on the policy matter. Should be able to turn around early next week.

Thanks

Reggie Cheatham, Director
Office of Emergency Management
202-564-8003(w) 202-689-9400(c)

From: Mugdan, Walter
Sent: 9/10/2015 6:59 PM
To: Cheatham, Reggie
Cc: Woolford, James; Rotola, Joe; Carpenter, Angela
Subject: Proposed Removal Work at the Wurtsboro Lead Mine Site

Dear Reggie,

On September 4, 2015, Region 2 received a referral from the New York State Department of Environmental Conservation requesting that the Wurtsboro Mine Site be evaluated for removal eligibility. Attached is the referral for your reference.

As indicated by the referral, this is a historical mine site and lead smelter that is located in a State Forest and the Sullivan County Linear Park. The area is heavily used for recreation. Although we have yet to prepare a formal Removal Site Evaluation, based on information shared with us by the NYSDEC we believe a removal action is warranted. In addition to four mine tailing piles with lead concentrations as high 14,000 ppm , there is an ongoing release of lead contaminated water emanating from an exploratory adit that discharges to the Delaware and Hudson Canal. Lead levels as high as 710 ppb have been detected in this discharge. The migration of soil due to soil erosion from one of the tailings piles has also resulted in contamination entering the Canal, as large volumes of tailing/sedimentation can be observed in that waterway. Lead concentrations as high as 15,000 ppm have been identified in the sediment. Sediment sampling has been conducted; however, the extent of contamination has yet to be determined. It should be noted that the lead is in a highly leachable form with the majority of the lead samples collected failing the Toxicity Characterization Leaching Procedure. Due to the ongoing releases that are occurring, the heavy use of this area for recreation and the threat posed to public health and the environment, the Region would like to secure and stabilize the site while options are evaluated for the control of the ongoing discharge and removal of the tailings.

We have reviewed the guidance on work at mining sites provided by Jim Woolford, OSWER-OSRTI Director, dated September 4, 2015, It is our opinion that the Wurtsboro site qualifies as a Category 1 site. Although there is water in the mine shaft, it is well characterized, free flowing and no known blockage exists. A power point which includes photographs of the mines, tailing piles and canal is attached for your information. Included are photos of the mine entrance, photos of State personnel deep within the mine adit, and photos of the discharge, which support the determination that there is no water dammed within the mine that would be affected by the activities we propose to carry out. Our initial removal activities will focus on restricting access to the site, and removal of the stockpiled tailings and contaminated sediment in the canal. Should any intrusive work be judged necessary to address the ongoing discharge of contaminated water from within the mine, such activities will be addressed in a subsequent Action Memo and we will coordinate with you before undertaking such work.

We are requesting your concurrence on this opinion so we can move forward on the partial funding of this site before the end of FY15. If you have any questions, please contact Joe Rotola, Chief of our Removal Action Branch.

We look forward to hearing back from you at your earliest convenience.

ATTACHMENT C

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Office of the Director
625 Broadway, 12th Floor, Albany, New York 12233-7011
P: (518) 402-9706 | F: (518) 402-9020
www.dec.ny.gov

September 4, 2015

Sent Via Email Only

Mr. Walter Mugdan, Director
Emergency & Remedial Response Division
United States Environmental Protection Agency
Region II
290 Broadway
New York, NY 10007-1866

Re: Removal Action Evaluation
Wurtsboro Lead Mine
NYSDEC Site No. 353013
Moore Lane
Mamakating (T), Sullivan County, NY

Dear Mr. Mugdan:

The New York State Department of Environmental Conservation (DEC) requests that the United States Environmental Protection Agency (EPA) evaluate the site referenced above for a CERCLA emergency removal action. This site has been discussed with Mr. Joe Rotola, EPA Federal On-Scene Coordinator (OSC), Edison, New Jersey.

The site is part of the State-owned Wurtsboro Ridge State Forest, which New York State acquired from the Open Space Institute in 1988. High levels of lead are present in four tailings piles – three near the top of the ridge where the mining excavations occurred, and one at the base of the ridge where the ore was processed. The fine fraction of these tailings piles contain levels of lead ranging from 1,000 parts per million (ppm) to 14,000 ppm, and are consistently hazardous by the toxicity characterization leaching procedure (TCLP). The tailings pile at the bottom of the ridge is adjacent to the Delaware & Hudson (D&H) Canal and Sullivan County Linear Park, with significant potential for public exposure. Water discharging from an exploratory adit near the lower tailings pile contains 710 parts per billion (ppb) of lead, and where this flows across the Sullivan County Linear Park and discharges into the D&H Canal, the lead level is 400-510 ppb. Preliminary investigations indicate that sediments in a long stretch of the canal are also contaminated with lead.

DEC has posted warning signs around the perimeters of the tailings piles, establishing restricted areas and warning that the soil and water in the area is highly contaminated with lead.

The principal threat is the potential for direct public exposure to high levels of lead in the tailings piles. The site has had unauthorized access as evidenced by all-terrain vehicle tracks, signs of target shooting, the presence of a geocache, and websites describing the collection of galena fragments in the tailings piles. Trespassers would be exposed to site hazards as a consequence of their intrusions. To address these threats, we request that EPA consider an emergency removal action to address the immediate threats.

Any questions or request for additional information regarding this site should be directed to Ms. Kiera Thompson, the DEC Project Manager, at (518) 402-9662.

Sincerely,

Michael J. Ryan, P.E.
Assistant Director
Division of Environmental Remediation

ec: Joe Rotola, EPA
Eric Mosher, EPA
James Daloia, EPA
George Zachos, EPA
Peter Kahn, EPA
Kelli Lucarino, EPA
Robert Schick, DEC
Andrew English, DEC
George Heitzman, DEC
Dennis Farrar, DEC
Edward Moore, DEC
Kiera Thompson, DEC

ATTACHMENT D